

STATE OF CALIFORNIA §

§

COUNTY OF ALAMEDA §

AFFIDAVIT

On this day, Mark Robert Tompkins appeared before me, the undersigned notary public, and after I administered an oath to him, upon his oath, he said:

“My name is Mark Robert Tompkins. I am over 18 years of age, of sound mind, and am competent in all respects to make this affidavit. I have never been convicted of a felony or misdemeanor involving moral turpitude. Everything contained herein is based upon my own personal knowledge and is true and correct.”

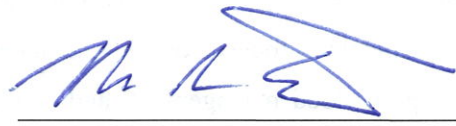
I hold B.S. and M.S. degrees in Civil and Environmental engineering from the University of Illinois, Urbana-Champaign, and a Ph.D. in Environmental Planning from the University of California, Berkeley. All of my academic work focused on river management, specifically in the areas of hydrology, hydraulics, sediment transport, flood management, and ecosystem restoration. I am a registered professional civil engineer in the States of California and Washington. I have over twenty years of professional consulting experience working on rivers throughout the United States. I have worked extensively on evaluations of the impacts of proposed structures along river corridors, including detailed flood management and river restoration studies on the Trinity River in Texas.

I have reviewed recent and historical aerial photographs in the vicinity of Fisher Industries’ proposed bollard fence project along approximately three miles of the Rio Grande River near the National Butterfly Center in Hidalgo County, Texas showing typical conditions along the river corridor in the vicinity of the proposed project. I have also reviewed photographs and other documentation of the Rio Grande River flooding during the extreme flows that occurred during Hurricane Alex in 2010. I have also reviewed Fisher Industries’ October 28, 2019 memorandum titled “Analysis of the lateral flow rates and volumes from floodway to floodplain” and six accompanying graphics prepared by Greg Gentsch, P.E. in support of Fisher Industries’ contention that their proposed “bollard fence will have no significant detrimental effect

on the performance of the Floodway channel.” These materials lack the detail and rigor required to support Fisher Industries’ conclusions regarding the detrimental effects of their proposed bollard fence project on the Rio Grande River ecosystem and surrounding landowners, including the National Butterfly Center. These materials do not state the range of Rio Grande River flows considered in their analyses, and do not appear to have considered extreme high flows such as occurred during Hurricane Alex in 2010. In addition, these materials do not appear to evaluate a range of flow conditions, making it impossible to determine how the proposed bollard fence project will impact the area under different combinations of river and surface flow. Further, the analyses do not appear to have considered sediment transport or debris transport at any flow.

I expect with a reasonable degree of scientific certainty that if constructed, the 15,600 foot long, 18 foot tall bollard fence will change hydraulic, sediment transport, and debris transport conditions in and along the Rio Grande River adjacent to, upstream of, and downstream of the proposed fence during future high flow events. In addition, I expect with a reasonable degree of scientific certainty that these hydraulic, sediment transport, and debris transport changes will detrimentally impact lands owned by the National Butterfly Center. These detrimental impacts could include topographic and vegetative changes detrimental to the ecological values of the National Butterfly Center’s land as well changes in erosion patterns that could effectively remove portions of the land and changes in deposition patterns that could effectively destroy portions of the land.

Further Affiant sayeth not.


Signature,

SWORN TO AND SUBSCRIBED before me by Mark Robert Tompkins on this the
2nd day of December, 2019.

(SEAL)


Notary Public - State of California

